

REMARKS

Favorable reconsideration of this application, in light of the following discussion, is respectfully requested.

Claims 11 and 13-28 are pending.

Entry of Amendment under 37 C.F.R. § 1.116

The Applicant requests entry of this Rule 116 Response because: the amendments were not earlier presented because the Applicant believed in good faith that the cited references did not disclose the present invention as previously claimed.

I. Rejection under 35 U.S.C. § 103

In the Office Action, at page 4, numbered paragraph 2, claims 11 and 13-28 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,181,944 to Uebayashi et al. in view of U.S. Patent Pub. No. 2004/0152471 to MacDonald et al. This rejection is respectfully traversed because the combination of the teachings of Uebayashi and MacDonald does not suggest:

receiving reports from the subscriber station at a receive station providing coverage for a radio cell in which the subscriber station is located, each report containing information relating to a signal strength at a location of the subscriber station of at least one receive signal received by the subscriber station and sent by a transmitting station;

storing the reports in a memory of the receive station of the radio communication system providing coverage for the radio cell in which the subscriber station is located;

receiving a request for position estimation at the receive station of the radio communication system; and

estimating the position at a position determining unit taking into account at least two reports stored prior to the request for position estimation,

as recited in independent claim 11.

Uebayashi discusses sending signal sequences (PN1, PN2), which are used to determine a phase difference between the phase of the second sequence PN2 and the phase of the first sequence PN1 in order to calculate a distance between a mobile station 100 and a base station 200 based on the phase difference.

The signal sequences PN1, PN2, however, do not contain a signal level or a signal strength. The signal sequences PN1, PN2 are merely used in determining the round trip time ("phase difference") from the mobile station 100 to the base station 200 and back. The signal sequences do not, as the Examiner asserts, relate to a signal strength of the signal.

At columns 5 and 6, Uebayashi discusses how the signal sequence is generated and discusses the timing of the signal sequence PN2 that is generated at the base station 200, after the base station 200 has received the first signal sequence PN1 from the mobile station 100, and which is transmitted to the mobile station 100. Thus, the signal sequences PN1, PN2 only relate to determining a round trip time from the mobile station 100 to the base station 200 and back to the mobile station 100. The signal sequences PN1, PN2 do not discuss or suggest a signal strength at a subscriber station of a receive signal. The signal sequence PN2, for example, is a receive signal itself, but does not suggest that a report is generated and transmitted which contains information as to a signal strength of the receive signal.

Further, Uebayashi does not store the received signal sequence PN1 at the base station 200 – the signal sequence PN1 is merely received and detected, and then a further signal sequence PN2 is generated at the base station 200 and transmitted after the signal sequence PN1 is received. The signal sequence PN2 is received by the mobile station 100 and the information is immediately processed. Uebayashi does not suggest that the signal sequence is stored at the mobile station 100 (see Fig. 1).

Additionally, Uebayashi does not suggest receiving a request for position estimation at the receive station of the radio communication system. In Uebayashi, two possible position check request modes are discussed. At col. 6, lines 1-6, Uebayashi discusses that the user issues a position check request signal to the mobile station device 100 (i.e., via the menu or a key of the mobile device), and at col. 6, lines 6-13, Uebayashi discusses that a user of a fixed network or another mobile station may issue the position check request to the mobile station device.

In contrast, the present invention receives a request for position estimation at the receive station (e.g., base station BS1) of the radio communication system and not at the subscriber station (e.g., mobile station MS). The request for position estimation in Uebayashi is received at the mobile station, which is the subscriber station and is not the receive station of the radio communication system. The present invention of claim 11, for example, receives the request at the base station BS1.

Further, Uebayashi is silent as to estimating the position at a position determining unit taking into account reports stored prior to the request for position estimation. Uebayashi does not discuss or suggest that any reports are stored prior to the request for position estimation. The Examiner alleges that the signal sequences PN1, PN2 correspond with the reports containing information relating to a signal strength at a location of the subscriber station of at least one receive signal received by the subscriber station and sent by a transmitting station. However, even assuming, *arguendo*, that signal sequences PN1, PN2 could be construed to be reports containing information relating to a signal strength of a receive signal, the signal sequences PN1, PN2 are only generated after the user has requested the position estimation. The signal sequences PN1, PN2 are not reports that were generated and stored prior to the request for position estimation.

The Examiner alleges that MacDonald makes up for the deficiencies in Uebayashi with respect to taking into account at least two reports stored prior to the request for position estimation (see page 3, Final Office Action).

MacDonald discusses receiving reported signal strengths from a mobile station (see paragraph 12, lines 3-6). The signal strength values stem either from drive tests or from computations. However, the signal strength values in MacDonald are not received signal strength values reported from a mobile station, as in the present invention. MacDonald discusses maintaining a mobile assisted hand-off (MAHO) list, which contains the signal strengths of the signals that the mobile telephone 120 is receiving over the control channels of nearby cells. However, MacDonald does not suggest that these signal strengths are transmitted from the mobile telephone 120 to a receive station so that the receive station (such as a base station) stores the reports in a memory of the receive station. The mobile telephone 120 does not transmit the information as to the signal strengths to another unit, but merely estimate a location based on the received signal strengths. The mobile telephone 120, however, does not transmit this information such that it would be stored in a memory of a receive station.

Further, as MacDonald only discusses that the mobile station itself receives the signal strengths of signals and estimates a location based on the received signal strengths of the signals, MacDonald is not suggestive of storing at least two reports prior to a request for position estimation, particularly because MacDonald does not suggest requesting position estimation from, for example, a receive station. Thus, as MacDonald only discusses analyzing the signal strengths of signals at the same mobile station that has received the signals and not at a receive station which has received the signal strength reports from a mobile station, then MacDonald

cannot be suggestive of estimating a position at a position determining unit taking into account at least two reports stored prior to the request for position estimation.

Additionally, MacDonald does not suggest storing the received signal strength values of the mobile station in a memory of a receive station, which has received the signal strength values from a subscriber station (e.g., a mobile station). MacDonald only discusses that the mobile station itself received the signal strength values, but not that those values are transmitted to a receive station.

Further, "in order to make more accurate position determinations as discussed by MacDonald (paragraph [0011])" is not an apparent reason with rational underpinning for modifying Uebayashi, particularly as to receiving reports from a subscriber station at a receive station and storing the reports in a memory of the receive station, where the reports are stored prior to a request for position estimation at the receive station. Uebayashi does not suggest receiving reports from a subscriber station at a receive station, such as a base station, and does not suggest that a request for position estimation occurs at the receive station. MacDonald only discusses that the mobile station (or subscriber station) receives signal strengths of signals, but not that the reports are stored at a receive station (or base station) prior to a request for position estimation at the receive station. Thus, MacDonald cannot make up for the deficiencies in Uebayashi as to receiving reports from a subscriber station at a receive station and prior to a request for position estimation at the receive station.

In addition, the apparent reason is merely a generalized suggestion as to position estimation, but the apparent reason does not suggest why one of ordinary skill in the art would receive reports as to signal strengths of signals, specifically prior to a request for position estimation at a receive station.

Also, modifying Uebayashi in light of MacDonald would change the principle of operation of Uebayashi. M.P.E.P. § 2143.01 states that "[i]f the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious." *In re Ratti*, 270 F.2d 810, 123 USPQ 349 (CCPA 1959). As the signal sequences PN1, PN2, which the Examiner alleges corresponds to the reports recited in independent claim 11, are only generated after the position check request signal is issued, then if Uebayashi were to be modified in light of MacDonald so that the signal sequences PN1, PN2 were to be generated before a request for position estimation is received, then the principle of operation of Uebayashi would be changed. In Uebayashi, in order for the signal sequences PN1, PN2 to be generated,

a request for position estimation must first be received by the mobile station device 100. Thus, if Uebayashi were modified in the manner suggested by MacDonald, the principle of operation (i.e., how the signal sequences are generated) of Uebayashi would be changed.

Further, modifying Uebayashi in light of MacDonald would render Uebayashi unsatisfactory for its intended purpose. M.P.E.P. § 2143.01 also states that “[i]f proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification.” *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984). Again, as the signal sequences PN1, PN2 are generated only after a request for position estimation is received at the mobile device 100, then if Uebayashi were modified so that the signal sequences PN1, PN2 (alleged to correspond with the “reports”) were generated prior to the request for position estimation, then Uebayashi would be rendered unsatisfactory for its intended purpose. Particularly, the signal sequences PN1, PN2 can only be generated after the request for position estimation is received. Thus, the signal sequences PN1, PN2 could not be modified to be generated and transmitted prior to the request for position estimation or Uebayashi would not work correctly.

Therefore, as the combination of the teachings of Uebayashi and MacDonald does not suggest “receiving reports from the subscriber station at a receive station providing coverage for a radio cell in which the subscriber station is located, each report containing information relating to a signal strength at a location of the subscriber station of at least one receive signal received by the subscriber station and sent by a transmitting station; storing the reports in a memory of the receive station of the radio communication system providing coverage for the radio cell in which the subscriber station is located; receiving a request for position estimation at the receive station of the radio communication system; and estimating the position at a position determining unit taking into account at least two reports stored prior to the request for position estimation,” as recited in independent claim 11, claim 11 patentably distinguishes over the references relied upon. Accordingly, withdrawal of the § 103(a) rejection is respectfully requested.

Further, the combination of the teachings of Uebayashi and MacDonald does not suggest “a memory for storing the reports, which the receive station providing coverage for a radio cell in which a subscriber station is located has received from the subscriber station, in which the reports in each case contain information relating to a signal strength at a location of the subscriber station of at least one receive signal received by the subscriber station and sent by a transmitting station; a transmitter to transmit, after a request for position estimation has been received at the receive station of the radio communication system, at least two reports

stored prior to receiving the request for position estimation," as recited in independent claim 28. Therefore, claim 28 patentably distinguishes over the references relied upon. Accordingly, withdrawal of the §103(a) rejection is respectfully requested.

Claims 13-27 depend either directly or indirectly from independent claim 11 and include all the features of claim 11, plus additional features that are not discussed or suggested by the references relied upon. Therefore, claims 13-27 patentably distinguish over the references relied upon for at least the reasons noted above. Accordingly, withdrawal of the § 103(a) rejection is respectfully requested.

Conclusion

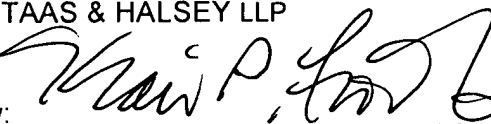
In accordance with the foregoing, claims 11 and 13-28 are pending and under consideration.

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,
STAAS & HALSEY LLP

By: 

Kari P. Footland
Registration No. 55,187

Date: May 17, 2010

1201 New York Avenue, N.W., 7th Floor
Washington, D.C. 20005
Telephone: (202) 434-1500
Facsimile: (202) 434-1501